FIG. 1

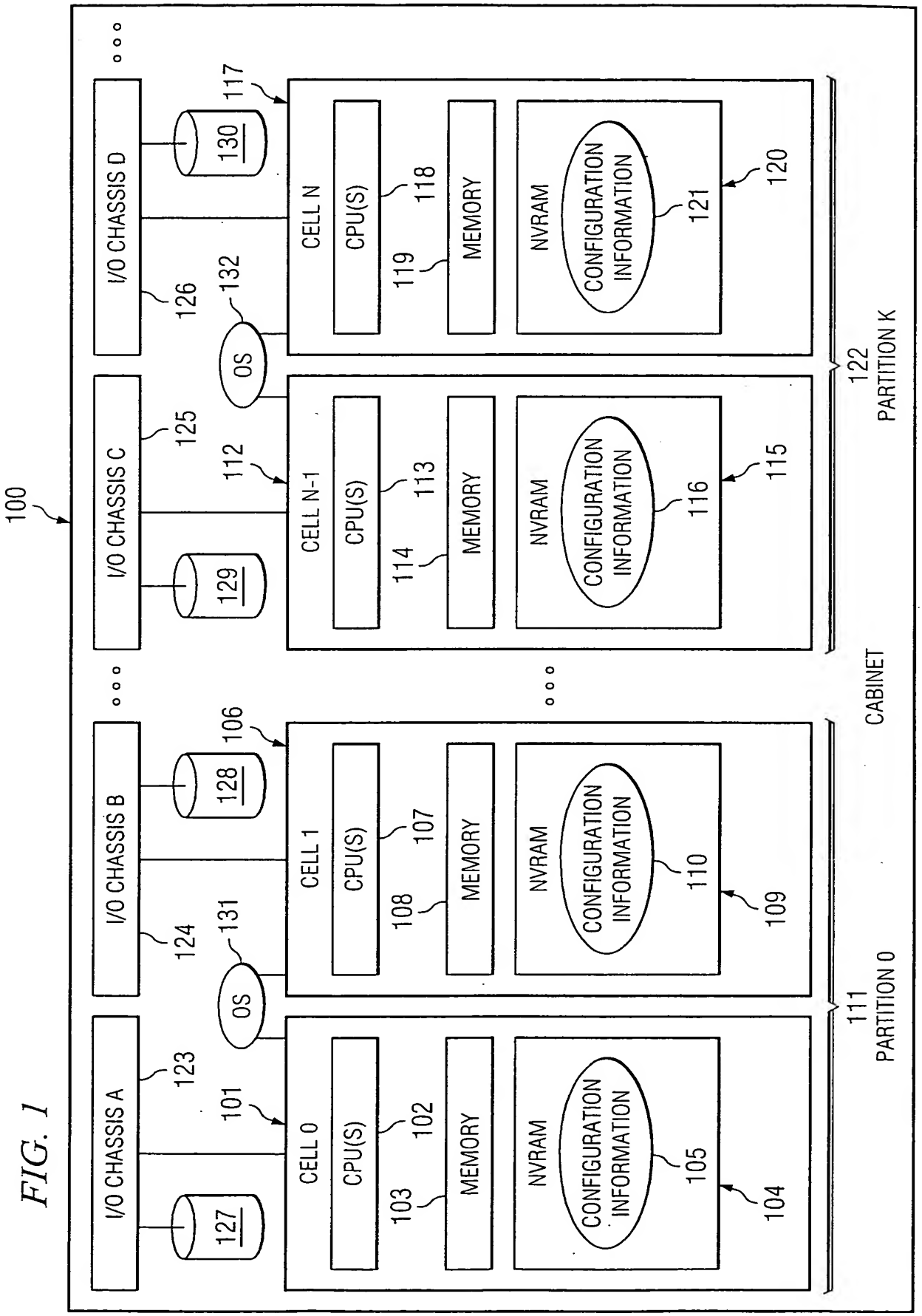

100
I/O CHASSIS A
I/O CHASSIS B
I/O CHASSIS C
I/O CHASSIS D
123
124
125
126
127
128
129
130
101
106
112
117
CELL 0
CELL 1
CELL N-1
CELL N
CPU(S)
MEMORY
NVRAM
CONFIGURATION INFORMATION
OS
131
132
102
103
107
108
113
114
118
119
104
105
109
110
115
116
120
121
111
PARTITION 0
122
PARTITION K
CABINET

FIG. 2A

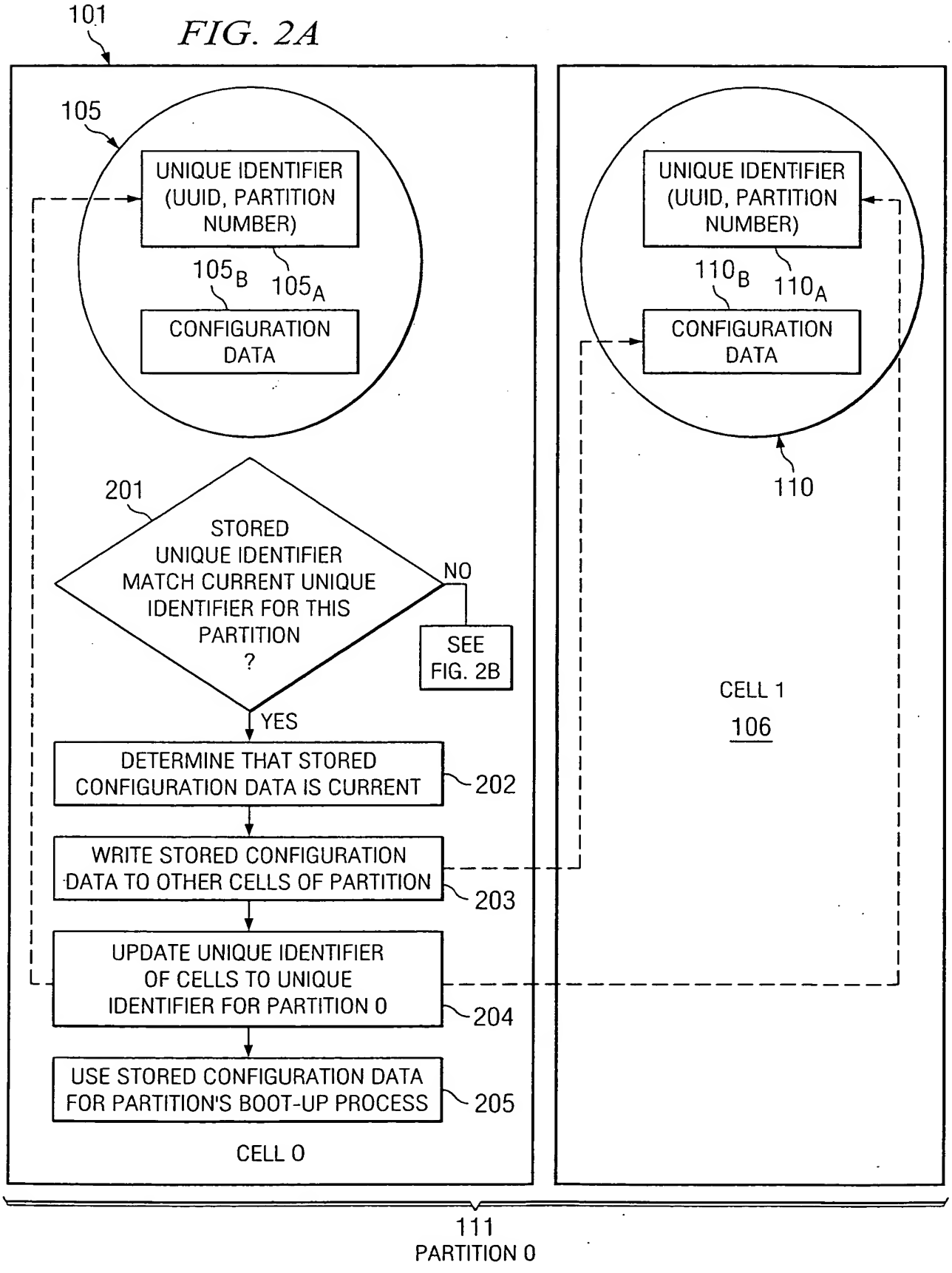

101
105
UNIQUE IDENTIFIER (UUID, PARTITION NUMBER)
105B
105A
CONFIGURATION DATA
UNIQUE IDENTIFIER (UUID, PARTITION NUMBER)
110B
110A
CONFIGURATION DATA
110
201
STORED UNIQUE IDENTIFIER MATCH CURRENT UNIQUE IDENTIFIER FOR THIS PARTITION ?
NO
SEE FIG. 2B
YES
CELL 1
106
DETERMINE THAT STORED CONFIGURATION DATA IS CURRENT
202
WRITE STORED CONFIGURATION DATA TO OTHER CELLS OF PARTITION
203
UPDATE UNIQUE IDENTIFIER OF CELLS TO UNIQUE IDENTIFIER FOR PARTITION 0
204
USE STORED CONFIGURATION DATA FOR PARTITION'S BOOT-UP PROCESS
205
CELL 0
111
PARTITION 0

FIG. 2B

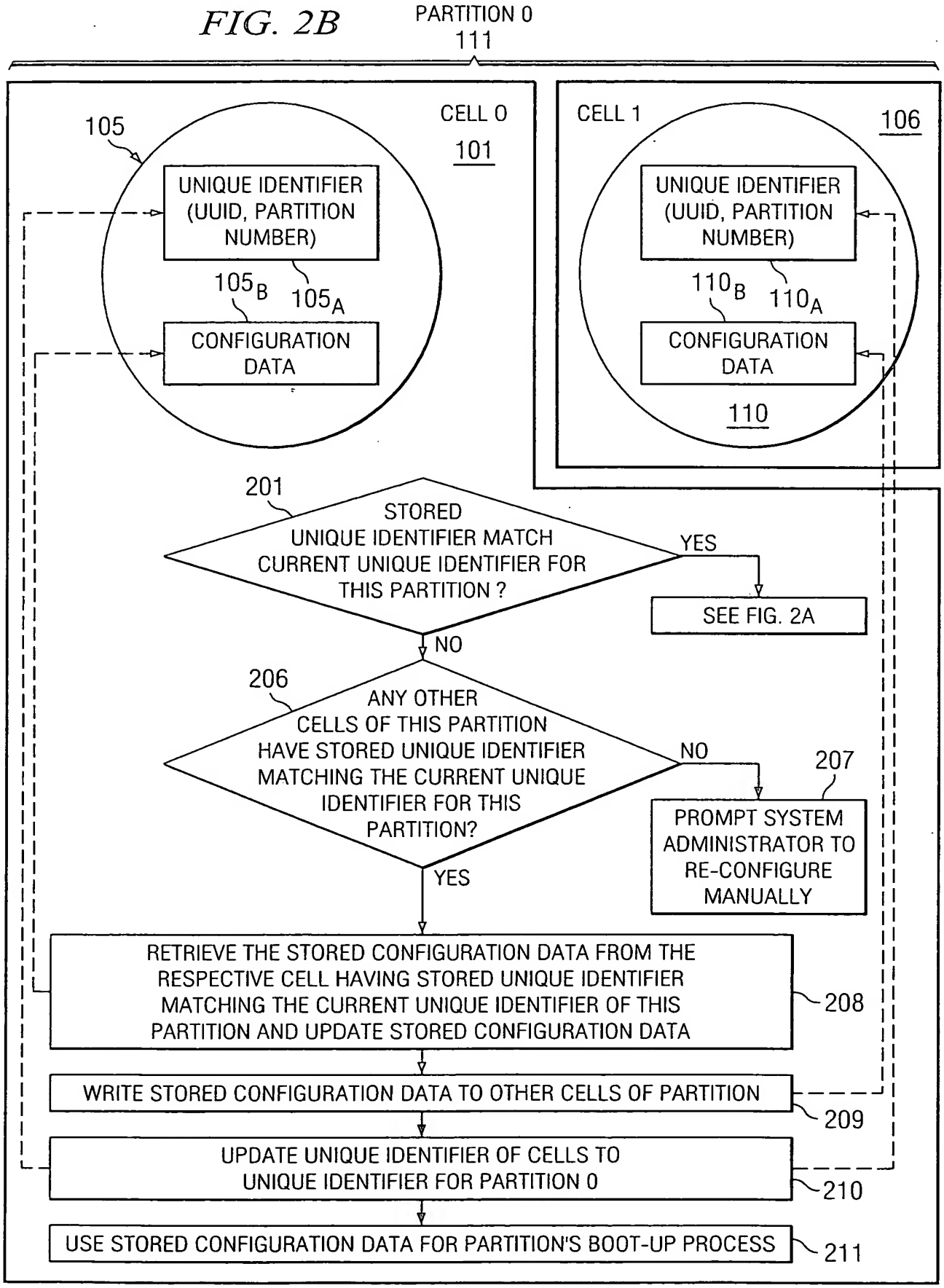
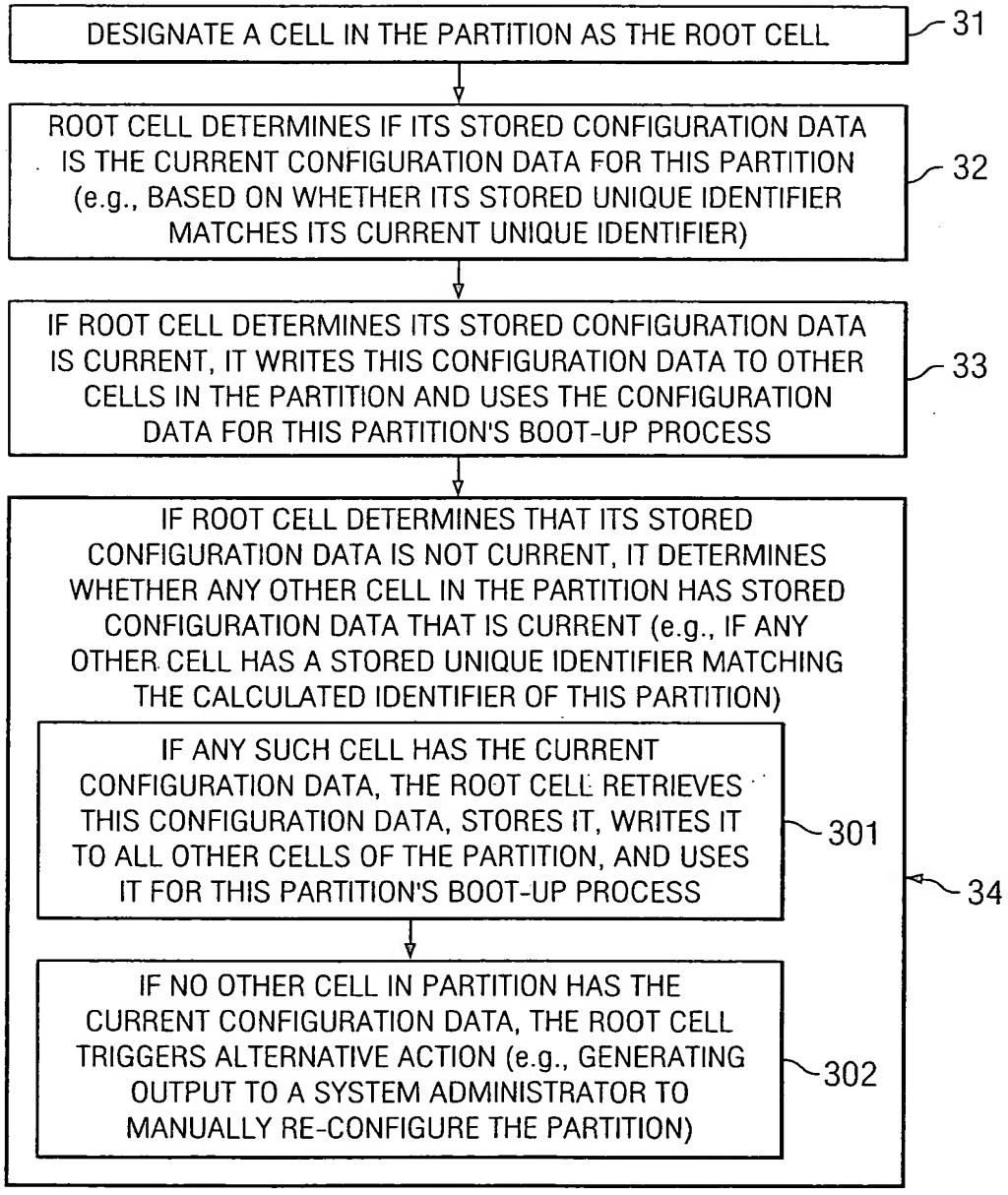

PARTITION 0
111
CELL 0
101
105
UNIQUE IDENTIFIER (UUID, PARTITION NUMBER)
105_B
105_A
CONFIGURATION DATA
CELL 1
106
UNIQUE IDENTIFIER (UUID, PARTITION NUMBER)
110_B
110_A
CONFIGURATION DATA
110
201
STORED UNIQUE IDENTIFIER MATCH CURRENT UNIQUE IDENTIFIER FOR THIS PARTITION ?
YES
SEE FIG. 2A
NO
206
ANY OTHER CELLS OF THIS PARTITION HAVE STORED UNIQUE IDENTIFIER MATCHING THE CURRENT UNIQUE IDENTIFIER FOR THIS PARTITION?
NO
207
PROMPT SYSTEM ADMINISTRATOR TO RE-CONFIGURE MANUALLY
YES
RETRIEVE THE STORED CONFIGURATION DATA FROM THE RESPECTIVE CELL HAVING STORED UNIQUE IDENTIFIER MATCHING THE CURRENT UNIQUE IDENTIFIER OF THIS PARTITION AND UPDATE STORED CONFIGURATION DATA
208
WRITE STORED CONFIGURATION DATA TO OTHER CELLS OF PARTITION
209
UPDATE UNIQUE IDENTIFIER OF CELLS TO UNIQUE IDENTIFIER FOR PARTITION 0
210
USE STORED CONFIGURATION DATA FOR PARTITION'S BOOT-UP PROCESS
211

FIG. 3


DESIGNATE A CELL IN THE PARTITION AS THE ROOT CELL
31
ROOT CELL DETERMINES IF ITS STORED CONFIGURATION DATA IS THE CURRENT CONFIGURATION DATA FOR THIS PARTITION (e.g., BASED ON WHETHER ITS STORED UNIQUE IDENTIFIER MATCHES ITS CURRENT UNIQUE IDENTIFIER)
32
IF ROOT CELL DETERMINES ITS STORED CONFIGURATION DATA IS CURRENT, IT WRITES THIS CONFIGURATION DATA TO OTHER CELLS IN THE PARTITION AND USES THE CONFIGURATION DATA FOR THIS PARTITION'S BOOT-UP PROCESS
33
IF ROOT CELL DETERMINES THAT ITS STORED CONFIGURATION DATA IS NOT CURRENT, IT DETERMINES WHETHER ANY OTHER CELL IN THE PARTITION HAS STORED CONFIGURATION DATA THAT IS CURRENT (e.g., IF ANY OTHER CELL HAS A STORED UNIQUE IDENTIFIER MATCHING THE CALCULATED IDENTIFIER OF THIS PARTITION)
IF ANY SUCH CELL HAS THE CURRENT CONFIGURATION DATA, THE ROOT CELL RETRIEVES THIS CONFIGURATION DATA, STORES IT, WRITES IT TO ALL OTHER CELLS OF THE PARTITION, AND USES IT FOR THIS PARTITION'S BOOT-UP PROCESS
301
IF NO OTHER CELL IN PARTITION HAS THE CURRENT CONFIGURATION DATA, THE ROOT CELL TRIGGERS ALTERNATIVE ACTION (e.g., GENERATING OUTPUT TO A SYSTEM ADMINISTRATOR TO MANUALLY RE-CONFIGURE THE PARTITION)
302
34

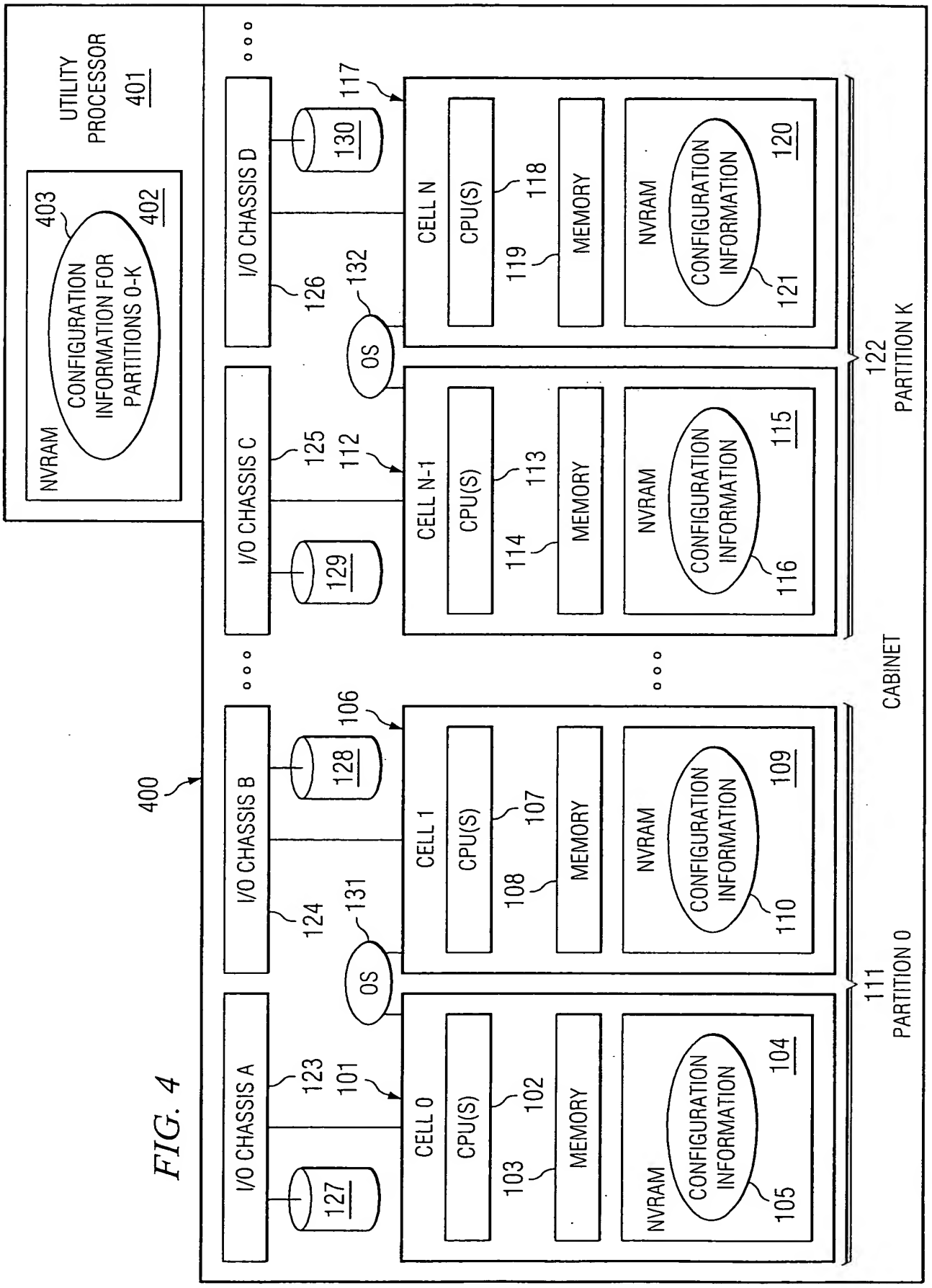
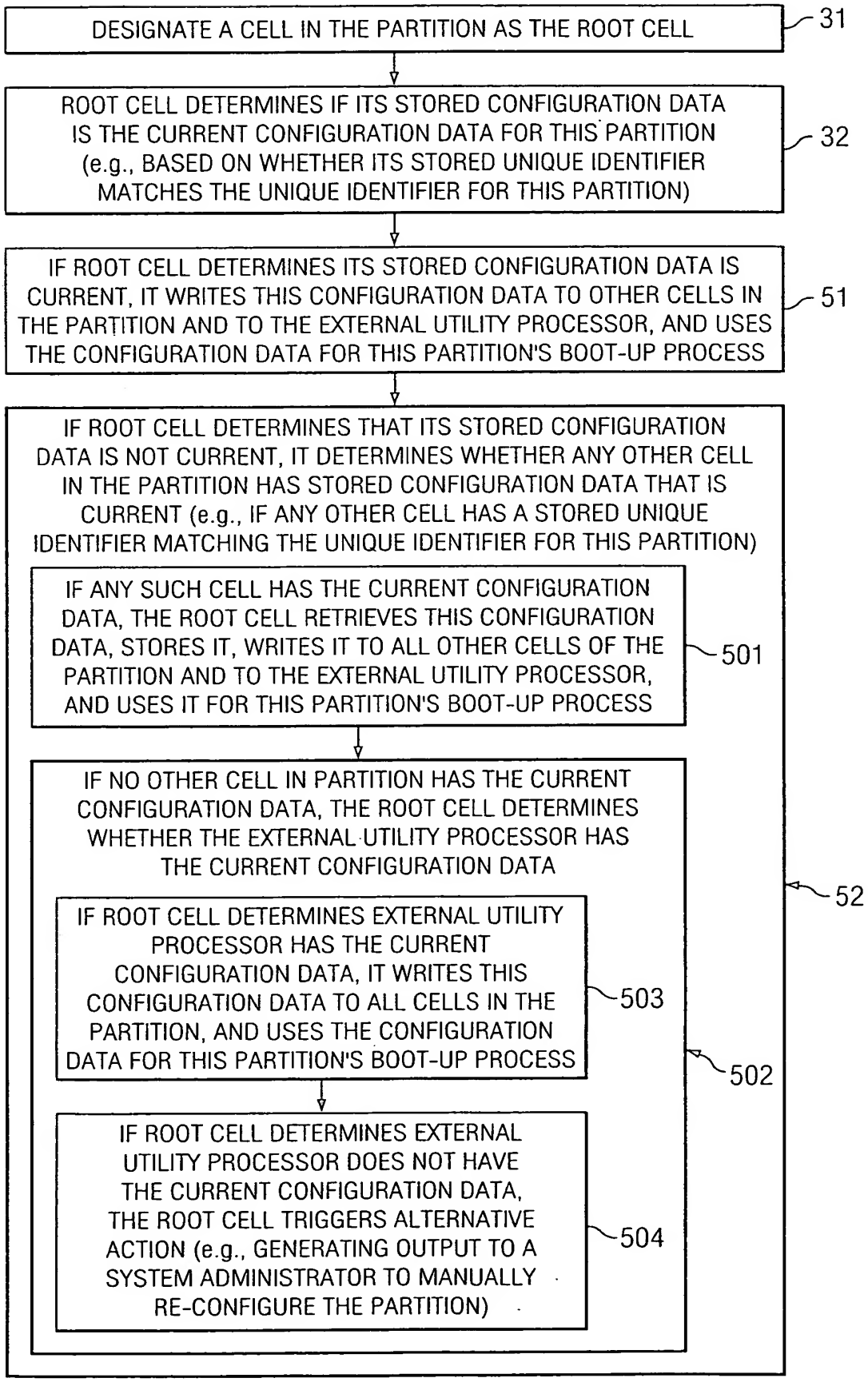

400
UTILITY PROCESSOR 401
NVRAM
403
CONFIGURATION INFORMATION FOR PARTITIONS 0-K
402
I/O CHASSIS A
I/O CHASSIS B
I/O CHASSIS C
I/O CHASSIS D
123
101
124
131
125
112
126
132
127
128
129
130
106
117
OS
CELL 0
CELL 1
CELL N-1
CELL N
CPU(S)
MEMORY
NVRAM
CONFIGURATION INFORMATION
103
102
104
105
108
107
109
110
114
113
115
116
119
118
120
121
111
PARTITION 0
122
PARTITION K
CABINET

FIG. 4

FIG. 5


DESIGNATE A CELL IN THE PARTITION AS THE ROOT CELL
31
ROOT CELL DETERMINES IF ITS STORED CONFIGURATION DATA IS THE CURRENT CONFIGURATION DATA FOR THIS PARTITION (e.g., BASED ON WHETHER ITS STORED UNIQUE IDENTIFIER MATCHES THE UNIQUE IDENTIFIER FOR THIS PARTITION)
32
IF ROOT CELL DETERMINES ITS STORED CONFIGURATION DATA IS CURRENT, IT WRITES THIS CONFIGURATION DATA TO OTHER CELLS IN THE PARTITION AND TO THE EXTERNAL UTILITY PROCESSOR, AND USES THE CONFIGURATION DATA FOR THIS PARTITION'S BOOT-UP PROCESS
51
IF ROOT CELL DETERMINES THAT ITS STORED CONFIGURATION DATA IS NOT CURRENT, IT DETERMINES WHETHER ANY OTHER CELL IN THE PARTITION HAS STORED CONFIGURATION DATA THAT IS CURRENT (e.g., IF ANY OTHER CELL HAS A STORED UNIQUE IDENTIFIER MATCHING THE UNIQUE IDENTIFIER FOR THIS PARTITION)
IF ANY SUCH CELL HAS THE CURRENT CONFIGURATION DATA, THE ROOT CELL RETRIEVES THIS CONFIGURATION DATA, STORES IT, WRITES IT TO ALL OTHER CELLS OF THE PARTITION AND TO THE EXTERNAL UTILITY PROCESSOR, AND USES IT FOR THIS PARTITION'S BOOT-UP PROCESS
501
IF NO OTHER CELL IN PARTITION HAS THE CURRENT CONFIGURATION DATA, THE ROOT CELL DETERMINES WHETHER THE EXTERNAL UTILITY PROCESSOR HAS THE CURRENT CONFIGURATION DATA
52
IF ROOT CELL DETERMINES EXTERNAL UTILITY PROCESSOR HAS THE CURRENT CONFIGURATION DATA, IT WRITES THIS CONFIGURATION DATA TO ALL CELLS IN THE PARTITION, AND USES THE CONFIGURATION DATA FOR THIS PARTITION'S BOOT-UP PROCESS
503
IF ROOT CELL DETERMINES EXTERNAL UTILITY PROCESSOR DOES NOT HAVE THE CURRENT CONFIGURATION DATA, THE ROOT CELL TRIGGERS ALTERNATIVE ACTION (e.g., GENERATING OUTPUT TO A SYSTEM ADMINISTRATOR TO MANUALLY RE-CONFIGURE THE PARTITION)
504
502